ASSIGNMENT-1

Assignment Date	30 september 2022
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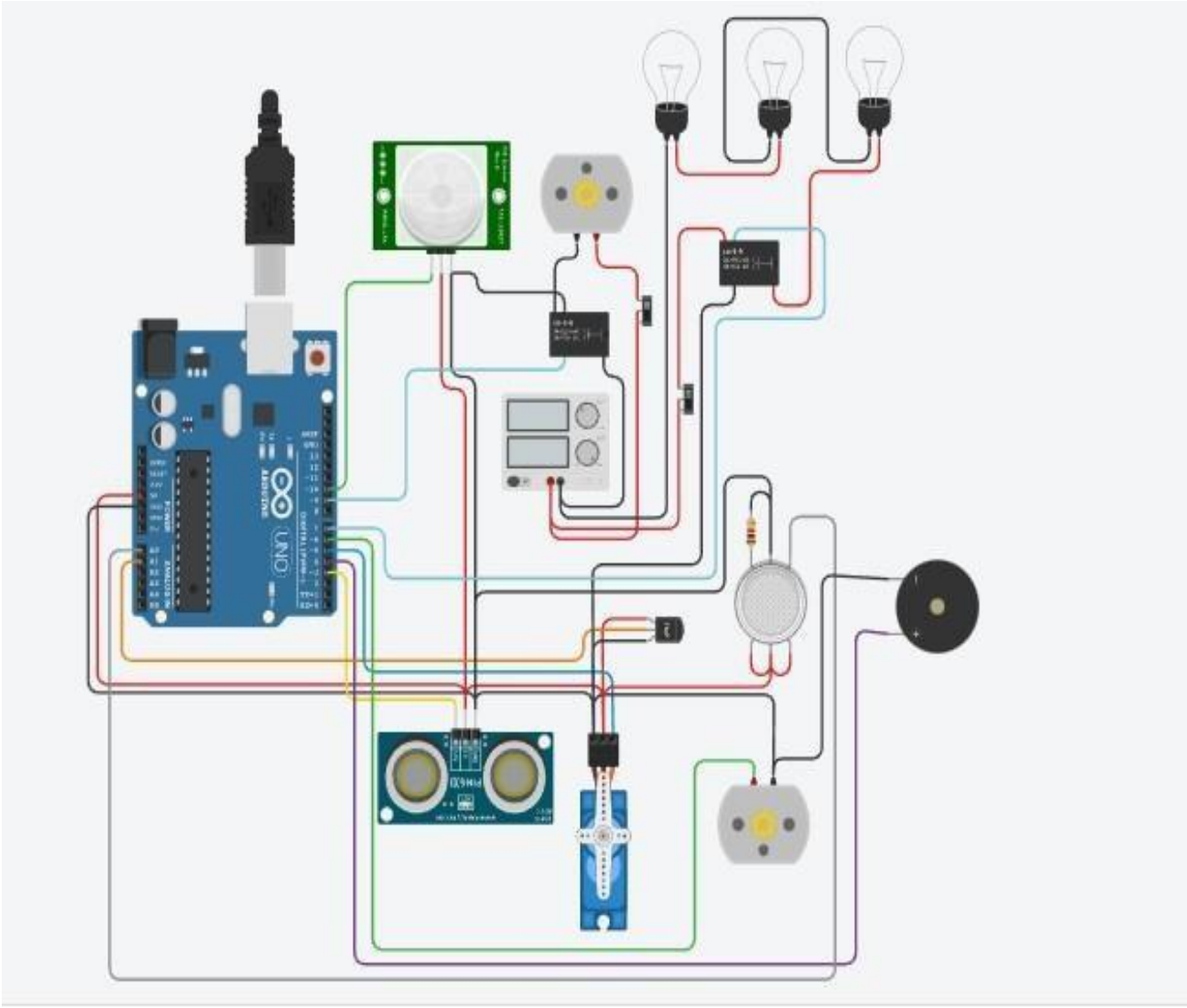
Maximum Marks	2 Marks

QUESTION :

Build a smart home in tinkercard use atleast two sensor ,LED, buzzer in a circuit. Simulate in a single code.

Circuit connections:



Code:

```
#include <Servo.h>

int Cabinet = 0;

int PIRS = 0;

int Gass = 0;

int Temps = 0;

long readUltrasonicDistance(int triggerPin, int echoPin)
{
  pinMode(triggerPin,  OUTPUT);    // Clear the trigger
digitalWrite(triggerPin, LOW);  delayMicroseconds(2);  //
Sets the trigger pin to HIGH state for 10 microseconds
digitalWrite(triggerPin,  HIGH);    delayMicroseconds(10);
digitalWrite(triggerPin, LOW);   pinMode(echoPin,
INPUT);
  // Reads the echo pin, and returns the sound wave travel time in microseconds   return
pulseIn(echoPin, HIGH);
}

Servo servo_5;

void setup()
```

```
{
 Serial.begin(9600);
servo_5.attach(5, 500, 2500);
pinMode(10, INPUT);   pinMode(9,
OUTPUT);   pinMode(7, OUTPUT);
pinMode(A1, INPUT);   pinMode(6,
OUTPUT);   pinMode(A0, INPUT);
pinMode(4, OUTPUT);
}

void loop()
{
 Cabinet = 0.01723 * readUltrasonicDistance(3, 3);
Serial.println(Cabinet);   if (Cabinet < 15) {
servo_5.write(90);     delay(5000); // Wait for 5000
millisecond(s)
 } else {
servo_5.write(0);
 }
 PIRS = digitalRead(10);
Serial.println(PIRS);   if
(PIRS    ==    HIGH)    {
digitalWrite(9,  HIGH);
digitalWrite(7, HIGH);
 }            else            {
```

```
digitalWrite(9,   LOW);       digitalWrite(7,
LOW);
  }
  Temps = (-40 + 0.488155 * (analogRead(A1) - 20));
Serial.println(Temps);   if (Temps >= 30) {     digitalWrite(6,
HIGH);
  } else {
digitalWrite(6, LOW);
  }
  Gass = analogRead(A0);
Serial.println(Gass);   if
(Gass     >=     220)     {
digitalWrite(4, HIGH);
  } else {
digitalWrite(4, LOW);
  }
}
```